## Patent claims:

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1. The use of herbicide combinations for controlling harmful plants in sugar beet crops, wherein the herbicide combination in question comprises an effective content of

(A) a broad-spectrum herbicide from the group of the compounds consisting of

(A1) compounds of the formula (A1)

$$H_{3}C \xrightarrow{P} CH_{2} \xrightarrow{CH_{2} - CH_{2} - CH_{2}} Z$$

$$OH \qquad NH_{2}$$

$$(A1)$$

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in which Z is a radical of the formula -OH or a peptide residue of the formula -NHCH(CH<sub>3</sub>)CONHCH(CH<sub>3</sub>)COOH or -NHCH(CH<sub>3</sub>)CONHCH[CH<sub>2</sub>CH(CH<sub>3</sub>)<sub>2</sub>]COOH, and its esters and salts, and other phosphinothricin derivatives,

(A2) compounds of the formula (A2) and their esters and salts,

$$\begin{array}{c|c}
O & H & O \\
HO - P - CH_2 & CH_2 & OH \\
OH & OH
\end{array}$$
(A2)

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(A3) imidazolinones and their salts,

and

(B) one or more herbicides from the group of the compounds consisting of

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- (B0) one or more structurally different herbicides from the abovementioned group (A) or
- (B1) foliar- and predominantly soil-acting herbicides which are active against monocotyledonous and dicotyledonous harmful plants, or

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- (B2) herbicides which are active predominantly against dicotyledonous harmful plants, or
- (B3) herbicides which are predominantly foliar-acting and which can be employed against monocotyledonous harmful plants, or

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(B4) herbicides which are both foliar- and soil-acting and which can be employed against monocotyle donous harmful plants,

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and the sugar beet crops tolerate the herbicides (A) and (B) which are present in the combination, if appropriate in the presence of safeners.

- 2. The use as claimed in claim 1, wherein glufosinate-ammonium is employed as active ingredient (A).
  - 3. The use as claimed in claim 1, wherein glyphosate-isopropylammonium is employed as active ingredient (A).
- 10 4. The use as claimed in any of claims 1 to 3, wherein one or more herbicides from the group consisting of
  - (B0) one or more structurally different herbicides from the abovementioned group (A) or
  - (B1) ethofumesate, chloridazon, triflursulfuron and its esters and metamitron or
  - (B2) desmedipham, phenmedipham, quinmerac and clopyralid and their salts or
  - (B3) quizalofop-P, quizalofop, fenoxaprop-P, fenoxaprop, fluazifop-P, fluazifop, haloxyfop P, cyhalofop and salts and esters of the last-mentioned nine active ingredients and clodinafop and propaquizafop or
  - (B4) sethoxydim, cycloxydim and clethodim or from among herbicides of more than one of groups (B0) to (B4) are employed as component (B).
  - 5. The use as claimed in any of claims 1 to 4, wherein the herbicide combinations are used in the presence of further active ingredients used in crop protection.
- 30 6. The use as claimed in any of claims 1 to 5, wherein the herbicide combinations are used together with auxiliaries conventionally used in crop protection and formulation auxiliaries.
- 7. A method of controlling harmful plants in tolerant sugar beet crops, which comprises applying the herbicides or herbicide combination as defined in one or more of claims 1 to 5 jointly or separately, pre-emergence, post-emergence or pre- and post-emergence to the plants, plant organs, plant seeds or the area under cultivation.

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- 8. A herbicidal composition, which comprises a combination of one or more herbicides (A) as defined in one of claims 1 to 3 and one or more herbicides from the group
- (B1') ethofumesate, chloridazon, triflursulfuron and metamitron or
- 5 (B2') desmedipham, phenmedipham, quinmerac and clopyralid or
  - (B3') quizalofop-P, fenoxaprop-P, fluazifop-P, haloxyfop, haloxyfop-P and cyhalofop or
- (B4') sethoxydim, cycloxydim and clethodim or a combination of a plurality of herbicides of groups (B1') to (B4') and, if appropriate, formulation aids and additives conventionally used in crop protection.
  - 9. The use of the composition as defined in any of claims 1 to 6 or claim 8 for regulating the growth of sugar beet plants.
  - 10. The use of the composition as defined in any of claims 1 to 6 or claim 8 for controlling the yield or the constituents of sugar beet plants.

